

IN THE CLAIMS:

1. (currently amended) A method for updating the configuration of a programmable logic device-based packet filtering system ("PLD system") operating to filter packets received from over a packet-based network using a protocol, comprising the steps of:

operating the PLD system in accordance with first configuration data, wherein in accordance with the first configuration data, the PLD system receives packets including at least first packets from the network, filters the first packets, and transmits the filtered first packets to an electronic connection coupled to the PLD system, wherein the PLD system filters the first packets at least in part based on source/destination address information and based on the first configuration data;

~~sending at least a first packet from a computing system to the PLD system over the network;~~

~~in response to the first packet, sending at least a second packet from the PLD system to the computing system over the network, wherein the second packet contains information identifying the PLD system and also information indicative of one or more commands in accordance with the protocol, wherein the PLD system operates in accordance with the one or more commands;~~

~~in response to the second packet, sending at least a third packet from the computing system to the PLD system, wherein the third packet comprises a command in accordance with the protocol and contains at least second configuration data for the PLD system;~~

receiving second configuration data for the PLD system sent from a computing system, wherein the second configuration data is selectively received by the PLD system based on version identification information for the PLD system, wherein the second configuration data are different from the first configuration data;

loading the second configuration into the PLD system; and

operating the PLD system in accordance with the second configuration data, wherein, in accordance with the second configuration data, the PLD system receives packets including at least second packets from the network, filters the second packets, and

transmits the filtered second packets to the electronic connection coupled to the PLD system, wherein PLD system filters the second packets at least in part based on source/destination address information and based on the second configuration data.

2. (currently amended) The method of claim 1, further comprising the step of, after receipt of the third packet is received by the PLD system, saving the second configuration data, storing the second configuration data contained in the third packet in non-volatile memory coupled to of the PLD system.

3. (original) The method of claim 2, wherein the non-volatile memory comprises Flash memory, electrically erasable and programmable read only memory or battery-backed-up random access memory.

4. (currently amended) A method for updating the configuration of a programmable logic device-based packet filtering system ("PLD system") operating to filter packets received from a packet-based network, wherein the PLD system is one of a plurality of PLD systems coupled to receive packets from the network, comprising the steps of:

operating the PLD system in accordance with first configuration data, wherein, in accordance with the first configuration data, the PLD system receives packets including at least first packets from the network, processes the first packets including at least a filtering operation, and transmits the processed first packets to an electronic connection coupled to the PLD system, wherein the PLD system processes the first packets at least in part based on source/destination address information and based on the first configuration data;

receiving second configuration data for the PLD system sent from a computing system over the network, wherein the second configuration data is selectively received via one or more second packets via the network, wherein the second configuration data are different from the first configuration data;

loading the second configuration into the PLD system; and

operating the PLD system in accordance with the second configuration data, wherein, in accordance with the second configuration data, the PLD system receives packets including at least third packets from the network, processes the third packets including at least a filtering operation, and transmits the processed third packets to the

electronic connection coupled to the PLD system, wherein PLD system processes the third packets at least in part based on source/destination address information and based on the second configuration data;

~~The method of claim 1, wherein a plurality of third second packets are received by the PLD system, wherein, after receiving each of the third one or more second packets, the PLD system sends at least a fourth packet to the computing system over the network, wherein the each fourth packets each acknowledge packet acknowledges receipt of a corresponding one of the third one or more second packets.~~

5. (currently amended) The method of claim 4, wherein after receiving each of the third one or more second packets, the PLD system saves second configuration data from the third one or more second packets in non-volatile memory coupled to of the PLD system.

6. (currently amended) The method of claim 5, wherein the PLD system saves the second configuration data in the non-volatile memory ~~of~~ coupled to the PLD system from each of the third one or more second packets prior to sending each fourth packet ~~of the fourth third packets.~~

7. (currently amended) The method of claim 5, wherein, after receipt by the computing system of a fourth packet that acknowledges receipt by the PLD system of a final third second packet, the computing system sends at least a fifth packet to the PLD system, wherein, in response to the fifth packet, the PLD system saves one or more data indicating that all of the second configuration data has been received and stored in the non-volatile memory.

8. (currently amended) The method of claim 4 ~~1~~, wherein the second configuration data is loaded into the PLD system in response to a user command from a user.

9. (original) The method of claim 8, wherein the user command comprises a command input by a switch.

10. (original) The method of claim 9, wherein the switch comprises a physical switch on the PLD system.

11. (original) The method of claim 8, wherein the user command comprises a command entered via the computing system.

12. (currently amended) The method of claim 4 ~~1~~, wherein one or more display devices provide visual feedback of the status of the PLD system.

13. (original) The method of claim 12, wherein the one or more display devices comprise one or more LEDs.

14. (original) The method of claim 12, wherein the one or more display devices comprise a liquid crystal display.

15. (currently amended) The method of claim 4 ~~1~~, wherein the PLD system provides audio feedback indicative of the status of the PLD system.

16. (original) The method of claim 12, wherein at least one LED indicates that the step of loading the second configuration data into the PLD system is in process.

17. (currently amended) The method of claim 4 ~~1~~, wherein the PLD system processes packets sent from the computing system in order to determine if the packets sent from the computing system contain one or more commands to which the PLD system is responsive.

18. (currently amended) The method of claim 17 ~~1~~, wherein the PLD system extracts one or more commands to which the PLD system is responsive in accordance with the protocol from the packets sent from the computing system.

19. (currently amended) The method of claim 1, ~~wherein the second packet includes a version identifier for the PLD system~~ wherein the step of receiving second configuration data for the PLD system sent from the computing system is selectively performed based on version identification information for the PLD system provided from the PLD system to the computing system.

20. (currently amended) The method of claim 19, wherein the ~~second packet contains information that identifies~~ version identification information is used to determine an identification of the second configuration data that are to be received by the PLD system ~~a plurality of commands in accordance with the protocol to which the PLD system responds.~~

21. (currently amended) The method of claim 1, wherein ~~the second packet contains information that is indicative of a location coupled to the network, wherein the location contains information that identifies a plurality of commands in accordance with the protocol to which the PLD system responds~~ the second configuration data are stored in a location remote from the PLD system.

22. (original) The method of claim 21, wherein the location comprises storage coupled to the computing system.

23. (original) The method of claim 21, wherein the location comprises storage on a second network, wherein the computing system accesses the storage via the second network.

24. (currently amended) The method of claim 23, wherein the ~~information that is indicative of the location comprises~~ is identified by an address of a node on the second network.

25. (original) The method of claim 23, wherein the second network comprises an Internet network.

26. (currently amended) The method of claim 25, wherein ~~the information that is indicative of the location comprises~~ a URL.

27. (currently amended) The method of claim 4 ~~1~~, wherein the plurality of PLD systems collectively respond to a plurality of commands that include one or more first commands to which the PLD system responds and also include one or more second commands to which the PLD system responds.

28. (original) The method of claim 27, wherein the first commands comprise core commands to which at least a second PLD system also responds.

29. (original) The method of claim 28, wherein the second commands comprise custom commands to which the second PLD system does not respond.

30. (original) The method of claim 1, wherein the network comprises a local area network.

31. (original) The method of claim 1, wherein the network comprises an Ethernet-based network.

32. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise UDP packets.

33. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise TCP packets.

34. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise Ethernet packets.

35. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise link layer packets.

36. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise network layer packets.

37. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise IP packets.

38. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise transport layer packets.

39. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the first, second or third packets comprise IPX packets.

40. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the packets sent by the computing system comprise broadcast packets having a predetermined address that are directed to a first predetermined port.

41. (currently amended) The method of claim 4 ~~1~~, wherein at least certain of the packets sent by the PLD system comprise packets having a predetermined source address that are directed to a ~~second~~ first predetermined port.

42. (original) The method of claim 1, wherein the PLD system does not implement a TCP/IP stack.

43. (original) The method of claim 1, wherein the PLD system comprises an FPGA.

44. (original) The method of claim 1, wherein the PLD system comprises an Internet security system.

45. (original) The method of claim 44, wherein the Internet security system comprises a firewall system.

46. (original) The method of claim 45, wherein the firewall system filters packets received from a second network.

47. (currently amended) The method of claim 4 ~~1~~, wherein the PLD system comprises a device selected from the group consisting of a PDA, a mobile telephone, a portable computer, a game system, a household appliance, a video recording system and a paging device.

48. (currently amended) The method of claim 4 ~~45~~, wherein the ~~firewall~~ PLD system operates in accordance with a first set of filtering rules based on the first configuration data, wherein the ~~firewall~~ PLD system operates in accordance with a second set of filtering rules based on the second configuration data.

49. (currently amended) The method of claim 4 ~~1~~, wherein the PLD system transmits packets containing information identifying the one or more commands in accordance with the protocol to which the PLD system responds, wherein the information is transmitted at least in part in the form of ~~comprises~~ XML code.

50. (currently amended) The method of claim 4 ~~1~~, wherein the PLD system includes a first logic unit that processes packets sent by the computing system, wherein the first logic unit identifies one or more commands in the packets sent by the computing system.

51. (currently amended) The method of claim 4 ~~50~~, wherein the PLD system includes one or more second logic units coupled to the first logic unit that carries out one or more operations that correspond to the one or more commands.

52. (currently amended) The method of claim 51, wherein the PLD system includes one or more third logic units, wherein the third logic units carry out one or more logic operations that correspond to packets that the PLD system transmits to the computing system.

53. (currently amended) The method of claim 4 ~~1~~, wherein the PLD system includes first and second logic portions, wherein a first logic portion operates to communicate packets in accordance with the ~~a~~ protocol with the computing system, wherein the second logic portion operates to carry out a process that does not comprise communicating packets in accordance with the protocol with the computing system.

54. (currently amended) The method of claim 41, wherein the computing system operates in response to software that is transmitted to the computing system from the PLD system.

55. (currently amended) The method of claim 41, wherein the computing system operates in response to software that is stored in a location identified by a packet from the PLD system.

56. (original) The method of claim 55, wherein the location comprises a storage location on a second network coupled to the computing system.

57. (original) The method of claim 56, wherein the location is identified by a network address or URL.

58. (original) The method of claim 55, wherein the location is determined from an identifier for the PLD system.

59. (currently amended) The method of claim 41, wherein the PLD system operates to perform a first process in accordance with the first configuration data, and wherein the PLD system operates to perform a second process in accordance with the second configuration data.

60. (original) The method of claim 59, wherein the first process is different from the second process.

61. (currently amended) The method of claim 59, wherein, after the PLD system operates to perform the first process, wherein in response to an input the PLD system reconfigures to operate to receive packets in accordance with the one or more commands and no longer operates to perform the first process; wherein after loading of the second configuration data the PLD system operates to perform the second process and no longer operates to receive packets in accordance with the one or more commands.

62. (original) The method of claim 1, wherein the PLD system comprises programmable logic having at least a first logic portion and a second logic portion, wherein, in response to loading of the second configuration data, the second logic portion is reconfigured and the first logic portion is not reconfigured.